CLAIMS

What is claimed is:

1. A method of manufacturing optical components comprising:

selecting a plurality of optical blocks for an optical component, wherein at least a portion of the plurality of optical blocks have thin-films disposed on at least one face;

arranging the optical blocks to permit optical signals to impinge at least a portion of the thin-films, wherein an attachment face of each optical block is adjacent an attachment face of another optical block; and

fusing the plurality of optical blocks together where an attachment face is adjacent another attachment face to form an optical component.

2. The method of claim 1, wherein arranging the optical blocks to permit optical signals to impinge at least a portion of the thin-films comprises arranging the optical blocks such that a first thin-film on a first optical block is diagonally opposed to a second thin film on a second optical block.

3. The method of claim 1, further comprising forming the plurality of optical blocks by:

depositing a thin-film on a glass substrate; and

dicing the thin-film and glass substrate to form optical blocks that have thin-films on a least one face of each optical block.

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4. The method of claim 1, wherein selecting a plurality of optical blocks for an optical component comprises:

growing a thin-film on glass substrate; and

dicing the thin-film and glass substrate to form optical blocks that have thin-films on at least one face of each optical block.

5. The method of claim 1, wherein fusing the plurality of optical blocks comprises:

polishing each of the optical blocks on at least one attachment face; and

pressing the attachment face of the each optical block to the attachment face on an adjacent optical block.

6. The method of claim 1, wherein the optical component is at least one of an optical add/drop module, an optical multiplexer, an optical demultiplexer, an optical tap, an optical add module and an optical drop module.

7. The method of claim 2, wherein the first thin film and the second thin film have substantially the same optical properties.

8. The method of claim 2, wherein the first thin film and the second thin film have different optical properties.

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9. An optical component comprising:

a first optical block comprising:

a first thin-film on at least one face of the first optical block; and

a first attachment face;

a second optical block comprising:

a second thin-film on at least one face of the second optical block; and

a second attachment face that is fused to the first attachment face to allow light to impinge the first and second thin films.

10. The optical component of claim 9, wherein the first and second thin-films have the same optical properties.

11. The optical component of claim 9, wherein the first and second thin-films have different optical properties.

12. The optical component of claim 9, wherein at least one of the first and second thin-films is configured to allow a specified wavelength of light to pass through the thin-film while reflecting other wavelengths of light.

13. The optical component of claim 9, wherein at least one of the first and second thin-films is configured to reflect a specified wavelength of light while allowing other wavelengths of light to pass through the thin-film.

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14. The optical component of claim 9, wherein at least one of the first and second thin-films is configured to reflect a plurality of wavelengths of light while allowing other wavelengths of light to pass through the thin-film.

15. The optical component of claim 9, wherein at least one of the first and second thin-films is configured to allow a plurality of wavelengths of light to pass through the thin-film while reflecting other wavelengths of light .

16. The optical component of claim 9, wherein the first and second thin-films are diagonally opposed to each other.

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17. A method of processing a multiplexed light signal comprising:

arranging first and second optical blocks to allow the multiplexed light signal to pass through the first and second optical blocks;

fusing an attachment face of the first optical block with an attachment face of the second optical block;

inputting the multiplexed light signal into the first optical block;

at a first thin-film disposed on the first optical block, reflecting at least one channel of the multiplexed light signal toward the second optical block while allowing at least one channel of the multiplexed light signal to pass through the first thin-film disposed on the first optical block; and

at a second thin-film disposed on the second optical block, reflecting at least one channel of the multiplexed light signal.

18. The method of claim 17, further comprising collimating the at least one channel of the multiplexed light signal allowed to pass through the first thin-film on the first optical block into a first fiber-optic cable.

19. The method of claim 17, further comprising adding a channel at the second optical block to combine with the multiplexed light signal.

20. The method of claim 17, wherein the first optical block is fused to the second optical block via at least one intermediary optical block.

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21. The method of claim 17, wherein reflecting at least one channel of the multiplexed light signal toward a second optical block comprises reflecting the at least one channel of the multiplexed signal in a direction diagonally opposed to the first thin-film disposed on the first optical block.

22. The method of claim 17, further comprising allowing at least one channel of the multiplexed light signal to pass through the second thin-film disposed on the second optical block.

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23. A method of manufacturing an optical component comprising:

disposing a thin film on an optical substrate, the thin film having optical properties;

dicing the substrate to form optical blocks;

polishing attachment faces on the optical blocks; and

fusing the optical blocks at the attachment faces to form optical components having a function that is related to optical properties of the thin film disposed on the optical substrate.

24. The method of claim 23, wherein disposing a thin film on an optical substrate comprises growing the thin film on the optical substrate.

25. The method of claim 23, wherein disposing a thin film on an optical substrate comprises depositing the thin film on the optical substrate.

26. The method of claim 23, further comprising arranging the optical block such that thin films on the optical blocks are diagonally opposed to each other.

27. The method of claim 23, wherein the optical components are one of:

optical add/drop modules;

optical multiplexers;

optical demultiplexers; and

optical taps.

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